IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

APPLICANTS:	Sang-Ryul Park	**EXAMINER**:	Antonio A. Caschera
APPL. NO.:	09/865,200	**GROUP ART UNIT**:	2676
FILING DATE:	May 24, 2001	**DOCKET**:	678-658 (P9451)

FOR: **COLOR DISPLAY DRIVING APPARATUS IN A PORTABLE MOBILE TELEPHONE WITH COLOR DISPLAY UNIT**

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Sir:

REAL PARTY IN INTEREST

The real party in interest is Samsung Electronics Co, Ltd, the assignee of the subject application, having an office at 416, Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea.

RELATED APPEALS AND INTERFERENCES

To the best of Appellant's knowledge and belief, there are no currently pending related appeals, interferences or judicial proceedings.

CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8 (a)

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, postpaid in an envelope, addressed to the Mail Stop Appeal Brief-Patents Commissioner for Patents, Alexandria, VA 22313-1450, on December 14, 2005.

Dated: December 14, 2005

Paul J. Farrell

STATUS OF CLAIMS

Original Claims 1-3 were filed on May 24, 2001. Claim 1 was amended and Claims 4 and 5 were newly added in an Amendment filed August 1, 2003. Claims 1 and 4 were amended in an Amendment filed January 6, 2004. Claims 3 and 5 were amended in an Amendment filed February 6, 2004. Thus, Claims 1-5 as presented in the Amendment filed February 6, 2004 are pending in the Appeal. Claims 1 and 4 are in independent form. For the purposes of this appeal, Claims 2-5 stand or fall together with Claim 1. Claim 1 is an apparatus claim, and Claim 4 is a method claim.

STATUS OF AMENDMENTS

Thus, the Appendix to this Appeal Brief includes independent Claims 1 and 4 as amended in the Amendment filed January 6, 2004, along with dependent Claim 2 as originally filed, and dependent Claims 3 and 5 as amended in the Amendment filed February 6, 2004.[1]

SUMMARY OF CLAIMED SUBJECT MATTER

The invention relates to a color display driving apparatus and method capable of simultaneously on-screen displaying an RGB format color image and a YUV format color image on a color display unit in a mobile telephone.

As recited in Claim 1, the apparatus has means for independently receiving YUV and RGB data in digital format (S^2 page 3, line 26 – page 4, line 6). For example, a first latch (10)[3] receives 16-bit YUV data, and a second latch (18) receives 8-bit or 16-bit RGB data.

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[1] The claims as presented in the Amendment filed February 6, 2004 are in the same form as the claims currently pending on appeal. These claims have been rejected in the Office Action dated September 15, 2004, and have now been rejected for a second time in the Office Action dated May 16, 2005.

[2] "S" used herein refers to the Applicant's originally filed Specification.

[3] The reference numerals refer to their corresponding elements as shown in the drawings.

The apparatus has a first memory for storing YUV data (12) (S FIG. 1, page 4, lines 15 – 22), and a second memory for storing RGB data (20)(S FIG. 1, page 5, lines 14 – 20).

The apparatus has a timing signal generator (22) for generating a timing signal for alternatively obtaining access to the first and second memories (12 and 20), and for providing the generated timing signal to the first and second memories (12 and 20) (S FIG. 1, page 4, lines 15 – 22, and page 5, lines 14 – page 7, line 16).

The apparatus has a YUV-RGB converter (16) for converting YUV data read from the first memory (12) to RGB data. For example, when the converted YUV format data is represented by YUV_Y, YUV_U, and YUV_V, the YUV-RGB converter 16 converts the 16-bit YUV format data YUV_Y, YUV_U and YUV_V to 24-bit RGB format data, i.e., the color components R, G, and B each including 8 bits (S page 4, line 29 – page 5, line 4).

The apparatus has an on-screen-display (OSD) controller (26) for writing the YUV data and the RGB data in the first and second memories (12 and 20), respectively, mixing the RGB data converted from the YUV data stored in the first memory (12) by the YUV-RGB converter (16) with the RGB data read from the second memory (20), and on-screen displaying the mixed data on the color display unit (S FIG. 1, page 3, line 30– page 4, line 1).

GROUNDS FOR REJECTION TO BE REVIEWED ON APPEAL

Whether Claims 1 and 4 under 35 U.S.C. §103(a) are unpatentable over U.S. Patent No. 6,268,847 to Glen (*Glen*) in view of U.S. Patent No. 5,844,623 to Iwamura (*Iwamura*) and U.S. Patent No. 6,339,422 B1 Kuwajima et al.(*Kuwajima*).

ARGUMENT

I. GLEN IN VIEW OF IWAMURA AND KUWAJIMA FAIL TO RENDER OBVIOUS THE INVENTION AS CLAIMED IN CLAIMS 1 AND 4.

Independent Claims 1 and 4 were said to be rendered obvious by *Glen* in view of *Iwamura* and *Kuwajima*. (See, paragraph 2, at p. 2, of the Office Action dated September 15, 2005.) *Glen* discloses a method and apparatus for improving quality of displayed video data on a device that uses YUV output data to produce a display. More specifically, *Glen* teaches a method and apparatus for receiving RGB data and YUV data, converting the YUV data to RGB data, combining the received RGB data and the converted RGB data, and converting the combined RGB to YUV data to be displayed.

Iwamura discloses a television set including an integrated receiver decoder. *Kuwajima* teaches a display control circuit.

It is the position of the Examiner [4] that the combination of *Glen* in view of *Iwamura* and *Kuwajima* renders obvious all the limitations of Claims 1 and 4. More specifically, the Examiner asserts that that *Glen* renders obvious all the recitations of Claims 1 and 4, except for an OSD controller, which is allegedly disclosed in *Iwamura*, and a timing signal generator, which is allegedly disclosed *Kuwajima*.

Claim 1 recites, among other things, a first memory for storing YUV data, a second memory for storing RGB data, a timing signal generator for generating a timing signal for alternatively obtaining access to the first and second memories, and for providing the generated timing signal to the first and second memories. Additionally, Claim 4 recites a method of operation corresponding to the elements recited in Claim 1.

However, *Glen* fails to teach or suggest the limitations of Claim 1. Specifically, *Glen* fails to teach or suggest a first memory for storing YUV data, which is accessed according to a timing signal generated by timing generator.

1. *Glen* fails to specifically teach or suggest a first memory for storing YUV data.

As defined in the specification of the present invention, a portable mobile telephone according to the present invention independently receives YUV and RGB data in digital format.

[4] See Office Action dated April 1, 2005, p. 4.

These independent data are then stored in respective memories, i.e., a first memory for storing the YUV and a second memory for storing the RGB data. Thereafter, a timing signal is generated for alternatively obtaining access to the first and second memories in order to convert the stored YUV data into RGB data, then mix this converted RGB data with the stored RGB data of the second memory, and display the mixed data.

There is no section of *Glen* that specifically recites a first memory for storing YUV data, as recited in Claim 1. Further, there is no section of *Glen* that teaches or suggest storing the YUV data in a first memory. Additionally, neither *Iwamura* not *Kuwajima* teach or suggest this recitation. Therefore, *Glen* in view of *Iwamura* and *Kuwajima* does not teach or suggest storing the YUV data in a first memory as recited in Claims 1 and 4.

2. *Glen* fails to inherently teach or suggest a first memory for storing YUV data.

In the Office Action dated September 15, 2004, the Examiner asserts that *Glen* discloses an RGB conversion module 12 for receiving RGB data and a first color base conversion module 14 for receiving YUV data, and that these conversion modules must "inherently comprise of some sort of first and second memories for storing the RGB and YUV data, respectively, in order to temporarily hold data for performing conversions upon". (See, Office Action dated September 15, 2004, pp. 2 and 3.)

Thereafter, the Examiner equates the first and second memories, as recited in Claim 1, with the inherent memories included in the RGB conversion module 12 and the first color base conversion module 14, respectively, as taught by *Glen*.

The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) Further, "[i]n relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy,* 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original)

In the Office Action of September 15, 2004, it is noted that the Examiner provided no basis in fact and/or technical reasoning to reasonably support the determination that the conversion modules necessarily include some sort of memories. (See, Office Action dated September 15, 2004, pp. 3, lines 3-6.)

In the Final Office Action dated May 16, 2005, the Examiner did provide some technical reasoning as to why the Examiner believes that there are inherent memories included in the RGB conversion module 12 and the first color base conversion module 14. (See, Office Action dated May 16, 2005, pp. 6, section 3) More specifically, the Examiner asserts that since multiple arithmetic computations are performed on the YUV data it must stored in some sort of register or memory. However, once any arithmetic computation is performed on the YUV data, it is no longer YUV data. Therefore, as it is not necessary to store the YUV data in order to perform a first arithmetic computation, it is possible to implement a YUV converter without including a memory for storing YUV data. Accordingly, as a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic, and because it is not necessary to store YUV data in *Glen*, *Glen* does not inherently recite a first memory for storing YUV data, as recited in Claim 1. Further, there is no section of *Glen* that inherently teaches or suggest storing the YUV data in a first memory. Additionally, neither *Iwamura* not *Kuwajima* teach or suggest this recitation. Therefore, *Glen* in view of *Iwamura* and *Kuwajima* does not teach or suggest storing the YUV data in a first memory as recited in Claims 1 and 4.

3. Assuming *Glen* does inherently teach or suggest a first memory for storing YUV data, combining the alleged timing technique from *Kuwajima* does not render the present invention obvious.

As indicated above, the present invention teaches a timing signal generator for generating a timing signal for alternatively obtaining access to the first and second memories, and for providing the generated timing signal to the first and second memories. The Examiner equates the single clock source providing a single clock signal to a VRAM memory, divided in first and second areas, in a variable control circuit of *Kuwajima* to this recitation of the present claim.

(See, Office Action dated September 15, 2004, pp. 4, lines 11-15.)

While it does appear that *Kuwajima* does teach transmitting a clock signal to two memories, and even assuming that *Glen* does inherently recite memories for storing YUV data and RGB data, respectively, it is not possible to combine the timing signal of *Kuwajima* to the alleged inherent memories of *Glen*. That is, as the alleged inherent memory of *Glen* would merely store the YUV data during conversion, this memory would not be alternatively accessed along with the alleged inherent memory for storing the RGB data, since in *Glen*, the conversion modules of the RGB and YUV data operate independently from each of other. However, in the present invention, a timing signal is generated for alternatively obtaining access to the first and second memories, and provided to the first and second memories. After being retrieved from the memory based on the timing signal, the YUV data is converted and then combined with the retrieved RGB data. Therefore, the timing of *Kuwajima* cannot be applied to the inherent memories of *Glen*, nor would the inherent memories in *Glen* ever be alternatively accessed.

Accordingly, based on at least the above distinctions, even assuming *Glen* does inherently teach or suggest a first memory for storing YUV data, combining the alleged timing technique from *Kuwajima* does not render the present invention obvious, as recited in Claims 1 and 4. Additionally, *Iwamura* would not cure this deficiency. Therefore, *Glen* in view of *Iwamura* and *Kuwajima* does not render the present invention obvious, as recited in Claims 1 and 4.

CONCLUSION

As the Examiner has failed to make out a prima facie case for an obviousness rejection, the rejection of Claim 1 and 4 must be reversed. It is well settled that in order for a rejection under 35 U.S.C. §103(a) to be appropriate, the claimed invention must be shown to be obvious in view of the prior art as a whole. A claim may be found to be obvious if it is first shown that all of the recitations of a claim are taught in the prior art or are suggested by the prior art. In re Royka, 490 F.2d 981, 985, 180 U.S.P.Q. 580, 583 (C.C.P.A. 1974), cited in M.P.E.P. §2143.03. The Examiner has failed to show that all of the recitations of Claims 1 and 4 are taught or suggested

by *Glen* in view of *Iwamura* and *Kuwajima*. Accordingly, the Examiner has failed to make out a prima facie case for an obviousness rejection.

Thus, independent Claims 1 and 4 are allowable.

Accordingly, dependent Claims 2-3 and 5 are allowable because of their respective dependence upon independent Claims 1 and 4.

Dated: DRAFT

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CLAIMS APPENDIX

1. (Previously Presented) A color display driving apparatus in a portable mobile telephone with a color display unit, comprising:

means for independently receiving YUV and RGB data in digital format;

a first memory for storing YUV data;

a second memory for storing RGB data;

a timing signal generator for generating a timing signal for alternatively obtaining access to the first and second memories, and for providing the generated timing signal to the first and second memories;

a YUV-RGB converter for converting YUV data read from the first memory to RGB data;

an on-screen-display (OSD) controller for writing the YUV data and the RGB data in the first and second memories, respectively, mixing the RGB data converted from the YUV data stored in the first memory by the YUV-RGB converter with the RGB data read from the second memory, and on-screen displaying the mixed data on the color display unit.

2. (Original) The color display driving apparatus as claimed in claim 1, further comprising a display format converter for converting the YUV data read from the first memory to a format compatible with the color display unit, and providing the converted data to the YUV-RGB converter.

3. (Previously Presented) The color display driving apparatus as claimed in claim 1, wherein the OSD controller further comprises:

an OSD mixer for mixing the RGB data output from the YUV-RGB converter with the RGB data output from the second memory.

4. (Previously Presented) A method of simultaneously displaying on an on-screen-display (OSD) of an RGB format color image and a YUV format color image, said OSD being a color display unit in a portable mobile telephone, the method comprising the steps of:

storing YUV data in a first memory;

storing RGB data in a second memory;

generating a timing signal for alternatively obtaining access to the first and second memories and providing the generated timing signal to the first and second memories;

converting said YUV data stored in the first memory to digital RGB data;

mixing the converted RGB data and the RGB data from the second memory in an OSD mixer of an OSD controller; and

displaying said mixed data on the color display unit.

5. (Previously Presented) The method of Claim 4, further comprising steps of:

receiving YUV data in a first latch;

receiving digital RGB data in a second latch;

converting the YUV data from the first memory to a format compatible with the color display unit.

EVIDENCE APPENDIX

There is no evidence submitted pursuant to 37 C.F.R. 1.130, 1.131, 1.132 or entered by the Examiner and relied upon by Appellant.

RELATED PROCEEDINGS APPENDIX

There are no known decisions rendered by a court or the Board in any proceeding identified pursuant to paragraph (c)(1)(ii) of 37 C.F.R. 41.37.